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ABSTRACT

An analysis of Gungbe, an African language, proposes that the determiner phrase (DP) has a head-initial underlying structure, and that the determiner system involves a more articulated structure, with the DP including different functional projections. The determiner and its number projection host the specificity marker and the number marker respectively. In terms of split-determiner hypothesis, they are considered two interrelated components of the determiner and must be in local relation. Further, it is proposed that the surface noun phrase-determiner-number projection found in Gungbe and in Gbe languages generally results from application of the Generalized Licensing Criterion. Extending the split-determiner hypothesis to the Gungbe pronominal class, a tripartition is suggested, with three pronoun types identified. Contains 68 references. (MSE)

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ED 420 209

ON THE SYNTAX OF GÚNGBE NOUN PHRASES[1]

1. INTRODUCTION

Gungbe[2], i.e., the Gbe languages in general, display determiner phrases (DP) where the determiner (i.e., the specificity marker[3]) obligatorily follows the nominal complement. This is illustrated in examples (1a-a') where we see that the noun *távò* 'table' precedes the specificity marker *lɔ́* which I take to be the manifestation of the category Determiner in Gungbe. In this context, the noun is interpreted as specific in the sense that it necessarily refers to an entity which is previously established in discourse or context (cf. Enç (1991), Campbell (1996), Pesetsky (1987)). I return to the discussion on the Gungbe specificity marker in section 3. The Gungbe (in)definite or generic noun[4] occurs in its bare form, i.e., with no marker as exemplified in (1b-b').

(1)a. *távò* *lɔ́*

table Det

'the (specific) table'

a'. *Kɔ́kú* *xɔ̀* *távò* *lɔ́*

Koku buy-Perf table Det

'Koku bought the (specific) table (e.g., the one we saw yesterday)'

b. *távò*

'table' ((in)definite or generic)

b'. *Kɔ́kú* *xɔ̀* *távò*

Koku buy-Perf table

'Koku bought a table'

Examples (1c-c') show that the Gungbe noun must also precede adjectives that modify it.

(1)c. *távò* *xóxó* *lɔ́*

table old Det

'the (specific) old table'

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c'. *távò ɖàxó xóxó lɔ́*
table big old Det
'the (specific) big old table'

In addition to the specificity marker, Gungbe also exhibits a number marker (or plurality specification) *lɛ́* which may cooccur with the specificity marker in a fixed order specificity marker-number marker (cf. 1d-d').

(1)d. *távò xóxó lɔ́ lɛ́*
table old Det Num
'the (specific) old tables'

d'. **távò xóxó lɛ́ lɔ́*
table old Num Det

When specified by the wh-marker *tɛ́* 'which', the noun precedes as illustrated in (1e). The wh-marker is incompatible with the specificity marker as shown in (1f). A possible explanation for example (1f) would be that the wh-phrase and the specificity marker compete for the same position. If true, this could be additional evidence in favour of an analysis of the specificity marker as an expression of the category Determiner.

(1)e. *Távò xóxó tɛ́ wɛ̀ Kòfí xɔ̀*
table old which Foc Kofi buy-Perf
'which old table did Kofi buy'

f *Távò xóxó tɛ́ lɔ́ wɛ̀ Kòfí xɔ̀*
table old which Det Foc Kofi buy-Perf

Finally, example (1g) shows that the Gungbe DP may allow for the cooccurrence of the noun, the adjective, the demonstrative, the determiner, the number marker in a fixed order: noun-adjective-demonstrative-determiner-number.

(1)g. *Távò xóxó éhè lɔ́ lɛ́*
table old Dem Det Num
'these (specific) old tables'

Building on the assumption that Gungbe (and Gbe languages in general) are of the type SVO (cf. Aboh (1996-1998), Avolonto (1995), Kynialolo (1995), Clements (1972) etc.), section 2 proposes an analysis along the lines of Abney's (1987) DP-hypothesis. In this respect, we suggest that the NP-Det order manifested in example (1a) is a consequence of the fact that the Gungbe NP-complements must move leftward to [spec DP] in order to be licensed[5] (cf. Koopman (1993), Kayne (1994), Kinyalolo (1995), Aboh (1996)). The motivation for NP-movement to [spec DP] is analysed in terms of the Generalised Licensing Criterion (henceforth GLC) as proposed by Sportiche (1992).

Since Gungbe DP also involves a number marker which can be realised simultaneously with the determiner (cf. 1d-d'), I further propose that these two elements do not compete for the same position. Instead, they realise different head positions in the Gungbe DP structure. That the Gungbe determiner and number marker cooccur with elements that are commonly assumed to be inserted in the determiner position, e.g., demonstratives, articles, etc., confirms this analysis. Unlike English where the demonstrative *this* and the article *the* mutually exclude each other, the Gungbe determiner, the number marker and the demonstrative freely cooccur as seen from example (1g). I thus conclude that this cooccurrence is made possible because the language involves a more articulated D-system than it might have appeared a priori. This leads me to conclude that each of the elements that manifest the D-system, e.g., the specificity marker (or determiner), the number marker, demonstratives etc., is associated either to a head position or to a specifier position of a functional projection that projects its own X-bar schema within the D-system (cf. Cinque (1993-1997))[6].

Pursuing the discussion, section 3 develops an analysis in terms of split-D hypothesis. In this respect, we suggest that D°, the host of the specificity marker (or the determiner), and Num° the locus of the number marker are the two major components of the D-system. They represent the heads of two interrelated projections that express the features [±specific] and [±plural] respectively. In this framework, D° appears to manifest the highest projection of the D-system while Num° expresses the lowest functional projection intermediate between the D-system and NP (or an extended projection of N, assuming Grimshaw (1991), Cardinaletti (1993), Giusti (1992), etc.).

Section 4 extends the split-D hypothesis to the Gungbe pronominal system. It appears, on the basis of Abney (1987), Kayne (1975), Cardinaletti (1993), Cardinaletti & Starke (1994), Zribi-Hertz & Mbolatianavalona (1997a) that the Gungbe pronominal system can be characterised in terms of a tripartition that postulates the existence of strong, weak and clitic pronouns. Strong pronouns are like full DPs and project a similar internal structure. Weak pronouns have a deficient internal structure because they lack some of the categories that are normally present in full DPs. It is argued, for example, that they only project the functional projections to which number and person specifications are associated. As for clitic pronouns, they are considered intransitive Ds in the sense of Abney (1987). Contrary to weak pronouns, they are not endowed with the category that is responsible for number specification, which is why they are only specified for person. Section 5 concludes the analysis proposed in this article.

2. THE GUNGBE D-SYSTEM

On my account of the Gungbe data, I pursue the idea already proposed in the literature, that the DP involves an articulated structure in the sense that there are several functional projections between the determiner and its NP-complement (Abney (1987), Ritter (1991-1992), Giusti (1992), Cinque (1993-1996) and subsequent work). I will extend this hypothesis to Gungbe and provide evidence for the existence of at least one functional projection: a 'Number Phrase' NumP which projects its own X'-bar schema between D° and NP (cf. Ritter (1991-1992-1995), Siloni (1991-1996-1997)).

2.1. The data

The examples presented in (2) below show some characteristics of the Gungbe D-system. As discussed above, the nominal complement precedes the determiner (cf. 2a), the demonstrative (cf. 2b), the numeral modifier (cf. 2c), the number marker (cf. 2d). Finally, in example (2e), the possessor precedes the Gungbe possessive marker *sín*[7] which in turn precedes the possessee.

(2)a. *àgásá lɔ́*

crab Det

'the (specific) crab'

b. *àgásá éhè*

crab Dem

'this crab'

c. *àgásá àtɔ̀n*

crab Nral

'three crabs'

d. *àgásá lé*

crab Num

'crabs'

e. *àgásá sín àfɔ*

crab Pos foot

'crab foot'

When they cooccur, the different elements which manifest the Gungbe D-system (determiner, demonstrative, numeral, number marker) must follow the strict word order:

1. noun(head) - numeral - demonstrative - determiner - number marker (cf. 2f) or

2. noun(complement) - possessive marker- *sín* - noun(head) - numeral - demonstrative - determiner - number marker (cf. 2g).

(2)f. *àgásá àtɔ̀n éhè lɔ́ lé*

crabs Nral Dem Det Num

'these (specific) three crabs'

g. *àgásá sín àfɔ àtɔ̀n éhé lɔ́ lé*

crab Pos foot Nral Dem Det Num

'these (specific) three feet of crab'

2.2. The analysis

As a first step to my account for the above data, I assume Abney's (1987) hypothesis that D° is a functional category that projects its own X-bar schema and takes NP as complement. I further suggest that the surface NP-D° word order manifested in Gungbe DPs results from the fact that NP-complements are attracted to [spec DP] where they are licensed (cf. Koopman (1993), Kinyalolo (1995)). The motivation for such NP-movement is the satisfaction of the GLC as proposed by Sportiche (1992). This criterion, actually an analogous of other criteria recently formulated in the literature (cf. May (1985), Rizzi (1991-1996), Haegeman & Zanuttini (1991), Haegeman (1995-1996), Brody (1990) among others), is defined as follows:

(3) Generalised Licensing Criterion

a. A [+f] head must be in a spec-head relationship with a [+f] XP,

b. A [+f] XP must be in a spec-head relationship with a [+f] head.

As it is expressed here, the GLC can be reformulated in terms of Chomsky's (1995) Checking Theory. In fact the GLC cannot be limited to DPs only, since it is an expression of the fact that at the appropriate level (of representation), an element of type X^{max} which is endowed with a feature [f] must be in a spec-head configuration with an element of the type X° bearing the same feature and vice versa. Accordingly, it is quite reasonable to assume that the GLC is a general well-formedness principle which applies universally at LF and whose interpretation with respect to specific features as wh, focus, topic, neg, etc., gives rise to wh, focus, topic and neg criteria as proposed in the literature.[8]

It is generally assumed in the literature that the functional category D° is an 'Infl-like' or 'Comp-like' element of the nominal system, in the sense that it is the anchorage of certain nominal features that are licensed through spec-head relationship[9] or checking mechanism in Chomsky's (1995) terminology (cf. Abney (1987), Szabolcsi (1987), Koopman (1993), Ritter (1992 - 1995) Zribi-Hertz & Hanne (1995) Campbell (1996), Siloni (1996-1997) among others). Granting that [±specific] is such a feature one may conclude that in specific DPs, the feature [+specific] is a property of the head D° (cf. Campbell (1996), Zribi-Hertz & Hanne (1995)). In terms of the GLC, it follows that a [+specific] D° must be in

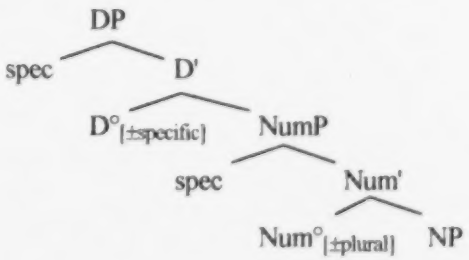
a spec-head relation with a [+specific] NP and a [+specific] NP must be in spec-head relation with a [+specific] D° . Consequently, two language-types arise:

1. languages where the GLC applies at SS and requires leftward movement of the NP-complement to [spec DP],
2. languages where the GLC applies at LF and no movement of the NP-complement to [spec DP] is observed in syntax.

Since [+specific] D° is realized in Gungbe by *lɔ́* which follows the NP-complement (cf. 1a, 2a), it can be reasonably argued that Gungbe is language of type 1. That is to say, the GLC applies at SS in Gungbe and requires leftward movement of the NP-complement to [spec DP]. The GLC is therefore responsible for the strict NP-Det order observed in sentences under (2a) above.[10]

Yet, as Gungbe also displays an autonomous number marker *lɛ́* that may occur independently or in combination with the determiner (cf. 2d-2f), I assume, in line with Ritter (1992 - 1995), Carstens (1991), that Gungbe is like Hebrew in the sense that its D- system involves a category Num° which is specified for the features [±plural]. Num° is the head of a Number Phrase (NumP) which projects between D° and NP (see Kinyalolo (1995) for a similar proposal in Fongbe). In Gungbe, the head Num° is realized at PF as *lɛ́* and expresses plurality. Accordingly, we can consider the partial representation in (4) below to be the underlying structure of Gungbe D-system. I return to the discussion of this structure in section 3.

(4)



Granting that the GLC applies at SS in Gungbe, one could conclude that NP-complements move cyclically to the specifier positions of Num° and D° to be licensed for the features [±plural], [±specific] as represented in (5).

(5) $[_{DP}\ NP_i..[_{D^\circ}\ l\acute{\jmath}\ \ [_{NumP}\ t'_i...[_{Num^\circ}\ l\acute{e}.....[_{NP}\ ..t_i..]]]]]$

If this is indeed the correct situation, then the question arises of how to account for the fact that demonstratives and numerals precede [+specific] D° - realized as *lɔ́* - which in turn precedes the number marker *lé* as in (2f-g) repeated here as (6a-b) for expository convenience.

(6)a. *àgásá àtɔ̀n éhè lɔ́ lé*
crabs Nral Dem Det Num
'these (specific) three crabs'

b. *sìɔ́nlà xwé àtɔ̀n éhé lɔ́ lé*
sister house Nral Dem Det Num
'these (specific) three sister houses'

2.2.1. On the relative order of certain noun modifiers

It has been long observed that languages tend to use modifying expressions 'either consistently before or consistently after modified elements or heads' (Hawkins 1983:2). In other words in a language where the direct object immediately precedes the verb (i.e. OV order), it is also observed that genitive, adjective and relative clause modifiers precede the modified noun as shown by the Japanese examples in (7a-c), while nominal complements are placed before the postposition as in (8d) (Hawkins' (6-9) p.2).

(7)a. Taroo no ie
Taroo 's house

b. kono omosiroi hon
'this interesting book'

c. Taroo ga issyoni benkyoosita hito
Taroo together studied person
'the person with whom Taroo studied'

d. Taroo ga zidoosya de Hanako to Tokyo kara ryokoosita
Taroo car by Hanako with Tokyo from travelled
'Taroo travelled from Tokyo with Hanako by car'

On the other hand, in a language where the object follows the verb (i.e. VO order) it is often the case that modifying genitive, adjective and relative clause occur to the right of the modified noun. In this case the language is prepositional. Hawkins (1983) illustrated this pattern with Samoan examples repeated here in (8a-d) (Hawkins' (11-14), p.2).

(8)a. o le paopao o Tavita
'the canoe of David'

b. o le teine puta
the girl fat
'the fat girl'

c. le teine o le sa moe i lona fale
the girl who was sleep in her house
'the girl who was asleep in her house'

d. i le potu
'in the room'

On the basis of similar observations made over 350 typologically different languages, Hawkins (1983) concluded that four major patterns characterise languages with respect to the sequencing of modifiers (e.g. numeral, adjective, demonstrative) in Noun Phrases:

(9) *A: 3 modifiers on the left and 0 on the right*,
Dem - Num - Adj - N (e.g., Mandarin, English, Finnish, Hungarian).

B: 2 modifiers on the left / 1 on the right,
(i) Dem - Num - N - Adj (e.g., French, Italian),
(ii) *Dem - Adj - N - Num (no examples),
(iii) *Num - Adj - N - Dem (no examples),

C: 1 modifier on the left / 2 on the right

(i) Dem - N - Adj - Num (e.g., Kabardian, Warao),

(ii) Num - N - Adj - Dem (e.g., Basque, Maori, Welsh, Vietnamese, etc.),

(ii) *Adj - N - Num - Dem (no examples).

D: 0 modifier on the left / three on the right,

N - Adj - Num - Dem (e.g., Selepet, Yoruba)

Hawkins 1983: 119

The starred word orders are unattested sequences which (in other respects) are ruled out by Hawkins' (1983) Universals (V') and (VI') based on the observation that:

(V') If a language has noun before demonstrative, then it has noun before adjective; i.e., N Dem ⊃ N A (equivalently: A N ⊃ Dem N),

(VI') If a language has noun before numeral, then it has noun before adjective; i.e., N Num ⊃ N A (equivalently: A N ⊃ Num N)

Hawkins 1983: 82

The above observations led Hawkins to reformulate Greenberg's (1966: 87) universal hypothesis with respect to word sequencing in Noun Phrases:

when any or all of the modifiers (demonstrative, numeral, and descriptive adjective) precede the noun, they (i.e., those that do precede) are always found in that order. For those that follow, no predictions are made, though the most frequent order is the mirror-image of the order for preceding modifiers. In no case does the adjective precede the head when the demonstrative or numeral follow.

Hawkins 1983: 120 -121

In other words two major patterns are found in languages. The first (A) corresponds to languages where modifiers precede the noun and the relative order adopted is demonstrative-numeral-adjective-noun. The second (D) conforms with languages where modifiers follow. In

this case, the preferred order, noun-adjective-numeral-demonstrative, is the mirror-image of the sequence found in (A) where modifiers precede.

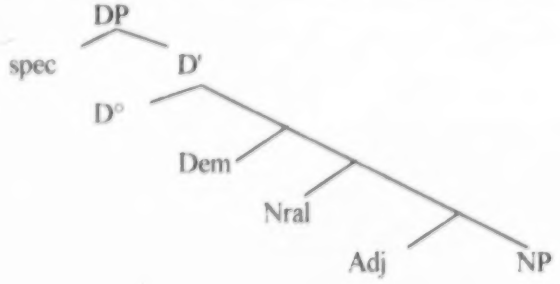
When we insert an adjective in sentence (6a) above, repeated here as (10a), we find that situation D perfectly describes the facts in Gungbe and other Kwa languages whereby the noun precedes the adjective, which precedes the numeral which in turn precedes the demonstrative as illustrated in (10a').

(10)a. *àgásá àtɔ̀n éhè lɔ́ lɛ́*
crabs Nral Dem Det Num
'these (specific) three crabs'

a'. *àgásá ɖàxó àtɔ̀n éhè lɔ́ lɛ́*
crabs big Nral Dem Det Num
'these (specific) three big crabs'

If one assumes Kayne's (1994) universal hypothesis that all languages are of the type specifier-head-complement, an immediate consequence is that only one basic order, here (A), exists: all the other sequences or situations (i.e., B - D) are obtained through N or NP movement to the left of the nominal modifiers, to the specifier or head positions of an intermediate functional projection between D° and NP (Cinque (1993). Accordingly, it is reasonable to propose, in line with Hawkins (1983), Cinque (1993-1996), Kayne (1994) and subsequent work, a universal basic order as represented in (11a).

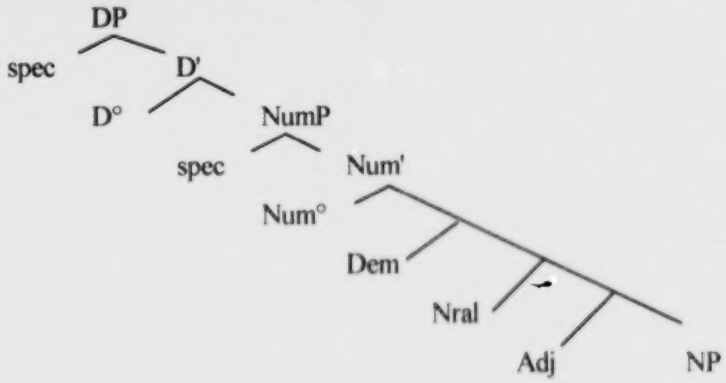
(11)a.



Empirical evidence from Gbe languages, Hebrew, Haitian Creole etc., which all display a D-system involving a morphological realised number marker, forces us to refine structure (11a) as in (11b). It is therefore argued, in line with Ritter (1991,1992,1995) that the functional

projection NumP is universally present in the D-system even though it is not morphologically realised in all languages (see also Koopman (1993))[11].

(11)b.



Building on representation (11b) above, we could propose that the GLC applies at SS and triggers cyclic movement of the NP-complement to the left of the adjective, the numeral, the demonstrative and finally to [spec NumP] and [spec DP]. But this is probably not the correct analysis as it wrongly predicts that the Gungbe noun precedes the determiner *lɔ́*, which in turn precedes the number marker *lé*, which precedes demonstratives and numerals as illustrated by the ungrammatical (12a) and represented in (12b)..

(12)a. **àgásá lɔ́ lé éhè àtɔ̀n*

crabs Det Num Dem Nral

b. [$_{DP}$ NP$_i$ ..[$_{D°}$ *lɔ́* [$_{NumP}$ t'''$_i$ ...[$_{Num°}$ *lé* / t''$_i$ Dem / t'$_i$ Nral [.t$_i$ ....]]]]]]]]

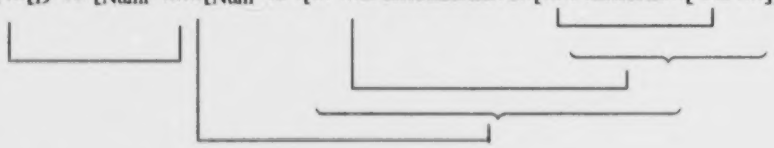
As seen from (10a) above, things are more intricate, since the surface word order (, i.e., noun-numeral-demonstrative-determiner-number) manifested in Gungbe DPs suggests that not only the NP is affected by leftward movement. Instead it appears that the GLC triggers successive movement of bigger chunks, i.e., snowballing movement[12], in combination to cyclic movement. In a first step, snowballing movement targets the NP-complement and moves it to the left of the numeral. Then the phrase noun-numeral moves to the left of the demonstrative to form the phrase noun-numeral-demonstrative. In a second step, the whole cluster noun-numeral-demonstrative moves cyclically to [spec NumP] and [spec DP], giving rise to the word order noun-numeral-demonstrative-determiner-number manifested in (6a) repeated here in (13a) and represented as (13b).

(13)a. *àgásá àtɔ̀n éhè lɔ́ lé*

crabs Num Dem Det Num

'these (specific) three crabs'

b. [DP...[D° *lɔ́* [NumP .....[Num° *lé* .[... ...Demonstrative..[....Numeral...[NP....]]]]]]]]



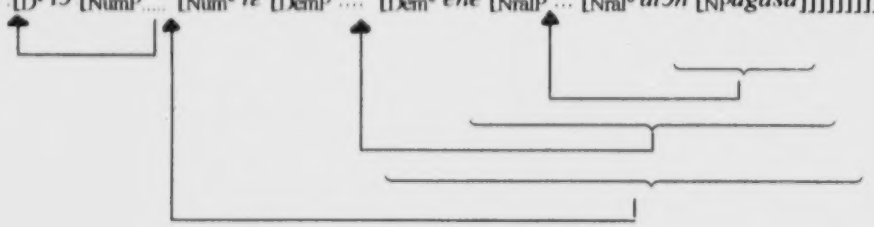
Now a question which remains unanswered is that of the categorial status of modifying elements of the D-system: Are Gungbe demonstratives and numerals heads or maximal projections?

2.2.2. Head vs. Maximal Projection

One way to account for the facts presented above would be to propose that each of the modifiers that precede the noun in the underlying structure (11b), (e.g., demonstrative, numeral) is an element of the type X° which projects its own X-bar schema between Num° and NP. Put differently, demonstratives and numerals are the heads of two functional projections, DemP and NralP respectively. On this basis, (13a) could be assigned the underlying structure (14a) below. At SS however, the GLC applies and the NP *àgásá* 'crab' moves to [spec NralP], then NralP *àgásá àtɔ̀n* 'crab three' moves to [spec DemP] to form *àgásá àtɔ̀n éhè* 'crab three this'. Finally, DemP moves cyclically to [spec NumP] and [spec DP] giving the sequence *àgásá àtɔ̀n éhè lɔ́ lé*.

(14)a. [DP...[D° *lɔ́* [NumP ...[Num° *lé*[[DemP ...[Dem°*éhè* [NralP... [Nral° *àtɔ̀n* [NP*àgásá*]]]]]]]]]

b. [DP .[D° *lɔ́* [NumP..... [Num° *lé* [DemP .... [Dem° *éhè* [NralP ... [Nral° *àtɔ̀n* [NP*àgásá*]]]]]]]]]



An alternative would be to propose that modifiers of the nominal system are maximal projections that occupy the specifier position of a functional projection that projects within the D-system. In this respect, Cinque (1993) suggests that the fact that adjectives are postnominal in Romance and prenominal in German does not follow from a head vs. maximal projection asymmetry. In other words, it cannot be claimed that Germanic adjectives are heads and block N-movement due to the head movement constraint, while their Romance counterparts, being maximal projections, do not have such effect on the noun movement.

Instead, it can be assumed that Germanic and Romance adjectives are elements of the type X^{max} occupying a specifier position. As a result, the different surface position of adjectives in Romance as opposed to Germanic is attributable to N-movement in Romance (but not in Germanic) to a functional head intermediate position between N and D. This is also the line adopted by Giusti (1992) who proposed that demonstratives as well as certain numerals are maximal projections which occupy the specifier position of a functional projection, say an agreement projection. This analysis is grounded on the observation that:

1. Demonstratives and article do not compete for the same position. Contrary to what is found in English, there are many languages where elements which are commonly referred to as determiners (e.g., demonstratives, possessives, quantifiers, articles, etc.,) are not in complementary distribution. A case in point is Gungbe which allows for both the 'D-element' *lɔ́* and the demonstrative *éhè* to cooccur, unlike English where the article and the demonstrative are in complementary distribution (cf. 15a-b).

(15)a. *àgásá éhè lɔ́*
crab Dem Det
'this (specific) crab'

b. *the this crab

2. The distribution of demonstratives is comparable to that of other modifiers such as adjectives that can also cooccur with articles and are realized pre or post-nominally across languages, as illustrated by the four word sequencings shown in (16). The order Dem - Art - N is found in sentences under (16a); Dem - N - Art corresponds to example (16b), Art - N - Dem to (16c) and N - Art - Dem to (16d).

(16)a.	autòs o aner	'this the boy'	**Greek**
	ika n anak	'this the boy'	**Javanese**
	ez a haz	'this the house'	**Hungarian**
b.	toj covek-ot	'this man-the'	**Macedonian**
c.	pan wig jainan	'the way this'	**Gothic**
d.	omul acesta	'man-the this	**Romanian**

3. In languages which manifest N-to-D movement, noun modifying elements such as demonstratives do not trigger minimality effects on the movement of the head noun (see Cinque (1993), Brugè (1996), Carstens (1991), Giusti (1992-1997), Longobardi (1994) among others).

This assumption is confirmed by data from Romanian, a language which allows for constructions without article as in (17a) alongside with constructions involving an article (cf. 17b) (see Giusti's examples (24)).

(17)a.	acest/ acel	bàiat
	this/ that	boy
b.	bàiat***ul*** acest***a*** / acel***a***	
	boy-the this-a/ that-a	

In sentence (17b), the demonstrative is postnominal and bears a morpheme ***a*** which is also found in pronominal demonstratives. In her account for postnominal demonstrative and article in (17b), Giusti (1992) assumes a head movement that adjoined the noun head to D° where the article is inserted, or base generated. As she observes, movement of the head noun to the left of the demonstrative *acest* is clearly indicated by the fact that the position of *acest* is fixed with respect to other modifiers.

There seems to be no leftward movement of the demonstrative to some higher position in the structure. For instance, the examples in (18) (Giusti's 26) show that the demonstrative does not move from its base position, since *aceste* is always left adjacent to the numeral *două*, whether it occurs prenominally as in (18a) or postnominally as in (18b). A change in the order Dem-Num automatically leads to ungrammaticality as shown by (18c-d).

16

(18)a. aceste douà frumoase fete
these two nice girls

b. fetele acestea douà frumoase
girls-the these two nice
'these two nice girls'

c. *fetele douà acestea frumoase
girls-the two these nice

d. *fetele douà frumoase acestea
girls-the two nice these

These facts led Giusti (1992) to conclude that constructions involving prenominal demonstrative are instantiations of N-to-D° movement. Partial justification for this is the observation that the demonstrative cannot be crossed over by an adjective, even though prenominal adjectives are possible in absence of the demonstrative (cf. 19a-b) (Giusti's (27)).

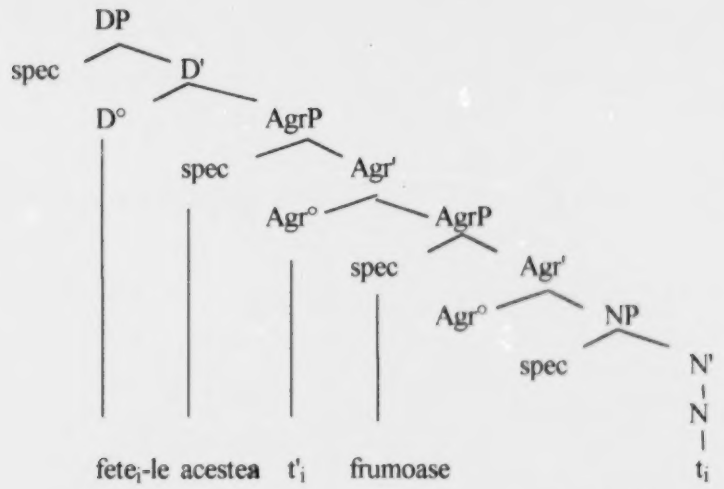
(19)a. *importantele acestea (recente) màsuri

b. importantele recente màsuri
important-the (*the) (recent) measures
'important recent measures'

A natural way to analyse the data in (18) and (19) is to assume minimality effect (cf. Rizzi (1990)). The demonstrative is considered an X^{max} element sitting in the specifier position of a functional category. It can be crossed over by the head noun on its way to D° (cf. 20b), but it blocks leftward movement of numerals (cf. 18c) and adjectives (cf. 18d - 19a). The morpheme ***a*** which is realized in postnominal demonstrative constructions could be regarded as 'a spec-head agreement marker that signals the presence of a trace in the intermediate head modified by the demonstrative' (Giusti 1992:9). This amounts to saying that there are intermediate AgrPs between DP and NP (see also Cinque (1993 -1996)). Accordingly, sentence (20a) can be represented as in (20b).

(20)a. fetele acestea frumoase
girls-the these nice
'these nice girls'

b.



Adapted from Giusti 1992: 10

Assuming this to be the correct characterisation in Romanian, we now have evidence against an analysis of Gungbe nominal modifiers in terms of head elements. To maintain such analysis would force us to postulate a language parametric variation in order to capture the distribution of nominal modifiers in natural languages (e.g. Germanic, Romance, Gbe, etc.,). But, as far as I can see, there is no strong evidence showing that Gungbe and Romanian nominal modifiers differ in nature. Recall that in both languages modifying elements cooccur with the determiner. For instance, it appeared in examples (13a) and (15a) above that Gungbe specificity marker *lɔ́* realises D° and may cooccur with both demonstratives and numerals. I take this to be a salient indication that demonstratives, numerals and 'D-elements' such as the determiner *lɔ́* and the number marker *lɛ́* do not compete for one and the same position, D°.

It is therefore reasonable to assume that Gungbe demonstratives, like their Romanian counterparts, are X^{max} elements that typically occupy specifier positions of different functional projections lower than D°. The same reasoning can be extended to numerals in the sense that they should be considered maximal projections, that realise the specifier position of a functional projection. In this study, I remain vague with respect to the categorial label of this functional projection. I will simply suggest, in line with Cinque (1993-1996), Giusti (1992-1995), that there are intermediate projections, say DemP and NralP, between D° and NP[13]. The labels DemP and NralP are used to indicate that the specifier positions of these functional projections host demonstratives and numerals respectively[14]. Put differently, the Gungbe DP

has an articulated structure involving several functional projections NumP, DemP, NralP that project between D° and NP (see also Carstens (1991-1997), Ritter (1991-1992 -1995), Koopman (1993), Giusti & Leko (1995), Brugè (1996), Brousseau & Lumsden (1992), Kinyalolo (1995), Siloni (1991-1996-1997), among others).

Notice, however, that in the system proposed here, D° and Num° differ from other potential heads (i.e. Dem°, Nral°) in that the former are morphologically realized in the language, while the latter are not. D° realises the specificity marker *lɔ́* and Num° hosts the number (or plurality) marker *lé*. It is assumed in this framework that D° takes NumP as complement and nothing can intervene between them (see section 3. below for the discussion). NumP precedes DemP which in turn precedes NralP.

2.2.3. The Gungbe DP and the GLC

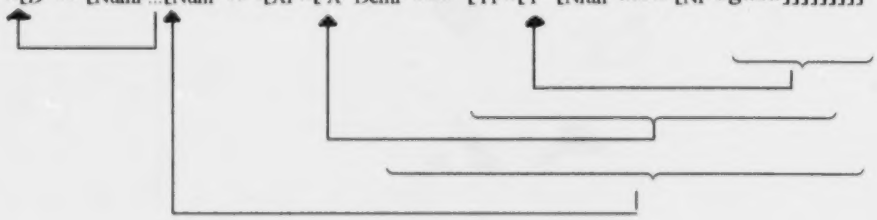
Within the system outlined here, sentence (13a) repeated in (21a) below can be derived if, everything being held constant, we assume that the NP-complement first moves leftward to [spec YP], a position preceding the numeral. Afterwards YP as a whole moves to [spec XP] to the left of the demonstrative. Finally, the functional projection XP moves cyclically into [spec NumP] and [spec DP] where it is licensed for the features [±plural] and [±specific] on the basis of the GLC. The derivation is illustrated in (21b)[15].

(21)a. *àgásá àtɔ̀n éhè lɔ́ lé*

crabs Nral Dem Det Num

'these (specific) three crabs'

b. [DP ..[D° *lɔ́* [NumP...[Num° *lé* ..[XP..[X° DemP *éhè* [YP..[Y° [NralP *àtɔ̀n* [NP *àgásá*]]]]]]]]]



An objection to this analysis could be to say that NP-movement to [spec YP] as well as movement of the whole YP to [spec XP] should yield relativized minimality effect, due to the

intervening numeral and demonstrative respectively. But let's assume, as already proposed in the literature that nominal modifiers, (i.e., numerals and demonstratives) realise an agreement position, that is, an A-position (see Giusti (1992) and references cited there). Suppose that [spec YP] and [spec XP] are A-bar (or adjoined) positions. An immediate consequence is that no relativized minimality effect should arise, since movement to [spec YP] and [spec XP] creates an A-bar chain that cannot be blocked by intervening A-positions in terms of Rizzi (1990).

2.2.4. On other possible intervening positions

Setting aside the positions where demonstratives and numerals are realized, we are forced to assume that there are at least two other positions, labelled here as AP and ZP that may host other modifiers. This idea is supported by the fact that modified nouns must precede adjectives as in (22a). When the noun is modified by a series of adjectives, the latter always follow as illustrated in (22b). In constructions where the adjective is combined with other modifiers that occur in the D-system, the order manifested is noun-adjective-numeral-demonstrative-determiner-number (cf. 22c).

(22)a. *távò* *xóxó*
table old
'old table'

b. *àvǔn* *yù* *ɖàgbèɖàgbè* *lɔ́* *lé*
dog black nice Det Num
'the (specific) nice black dogs'

c. *àvǔn* *ɖàxó* *àtɔ̀n* *éhè* *lɔ́* *lé*
dog big Nral Dem Det Num
'these (specific) three big dogs'

Assuming the underlying structure adopted in (21b) above, I propose that adjectives are like demonstratives or numerals: they occupy the specifier position of a functional projection (cf. Cinque (1993-1996) Giusti (1992-1995)). The order noun-adjective-numeral-demonstrative-Det-Num found in (22c) can therefore be seen as an evidence that there must be a position to

the left of the adjective, where the NP can move to. Then the phrase noun-adjective, represented here by ZP, can move to the specifier position of the maximal projection YP which in turn moves to [spec XP]. Finally XP moves successively in [spec NumP] and [spec DP] to be licensed (cf. 23)[16].

(23) [$_{DP}$[$_{D°}$ *lɔ́* [$_{NumP}$[$_{Num°}$ *lé*[$_{XP}$[$_{X°}$ [$_{DemP}$ *éhè*[$_{YP}$[$_{Y°}$[$_{NraIP}$*àtɔ̀n*[$_{ZP}$[$_{AP}$ *ɖàxó*[$_{NP}$ *àgásá*]]]]]]]]]

2.2.5. The GLC as a requirement on chains

An immediate conclusion that arises from the analysis proposed above is that the specifier position of Number (Phrase) is an escape hatch for XP on its way to [spec DP]. Accordingly [spec NumP] and [spec DP] are members of the same chain. Granting that head and specifier share the same features, hence the same indices (see Chomsky (1986), Rizzi (1990 -1996), Haegeman (1994-1995) and references cited there), I propose that the features [±plural] and [±specific] are properties of the representational chain <XP_i.....t_i>, where XP has the form noun-numeral-demonstrative (cf. 21a). As a consequence, the GLC is satisfied by virtue of a spec-head relation between the chain and the relevant D-element, here D°. In other words, the GLC must be interpreted as requiring that a head category which is marked as [+f] must be in a spec-head configuration with a chain whose head also has the feature [+f]. In this respect, XP- trace is co-indexed with Num° as well as XP which is also co-indexed with D°. Accordingly D° is co-indexed with Num° by transitivity and the GLC can be satisfied at SS as illustrated in (24) below:

(24) [$_{DP}$ [*àgásа àtɔ̀n éhè*]$_i$ [$_{D°}$ *lɔ́*$_i$ [$_{NumP}$ t'$_i$ [$_{Num°}$ *lé*$_i$ [$_{XP}$ t $_i$]]]]]

It results from this analysis that the GLC does not require that the moved XP remain in [spec NumP], rather, the criterion is satisfied by virtue of the representational chain <XP_i .... t_i >. This implies that Gungbe D° and Num° must occur in a fixed order and be in a

local relation in the sense of Rizzi (1990))[17]. This is in fact what we find in the Gungbe examples under (25) below. Example (25a) indicates that the specificity marker *lɔ́* and the number marker *lé* must always be realized in the order *lɔ́ - lé* and never **lé lɔ́* as showed by ungrammatical (25b). Moreover, nothing can intervene between these two elements, since such intrusion will inevitably break the local relation between D° and Num° and lead to a violation of the GLC. Compare, for example, grammatical (25c) as opposed to ungrammatical (25d), (see also Kinyalolo (1995) for a similar discussion on Fongbe data).

(25)a. *távò lɔ́ lé*
table Det Num
'the (specific) tables'

b. * *távò lé lɔ́*
table Num Det

c. *távò éhè lɔ́ lé*
table Dem Det Num
'these (specific) tables'

d. **távò lɔ́ éhè lé*
table Det Dem Num

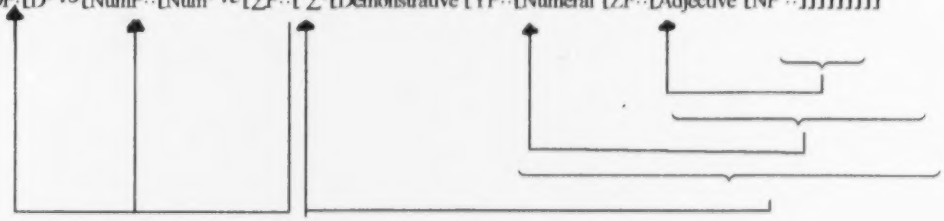
2.3. Summary

In the preceding sections, I have shown that the Gungbe D-system provides evidence for a more articulated structure in the sense that it involves a series of functional heads that project between D°, manifested in the language by the specificity marker *lɔ́*, and NP. One such category is NumP whose head hosts the number marker *lé*. As noted earlier, D° and Num° must be adjacent. Other elements that are realised in the D-system, e.g. demonstratives, numerals and adjectives are elements of the type X^{max} which occupy the specifier positions of different functional projections labelled here as DemP and NralP. Under Giusti (1992), such functional projections can be analysed in terms of a recursive agreement phrase (AgrP*). See also Crisma (1991).

I further assume that the GLC applies at SS in Gungbe and involves two movement-types: snowballing movement and cyclic movement. On the one hand, snowballing movement triggers NP-movement to the left of the adjective. Then, the phrase noun-adjective moves to the left of the numeral leading to the phrase noun-adjective-numeral. This phrase moves to the left of the demonstrative creating as such the phrase noun-adjective-numeral-demonstrative. On the other hand, cyclic movement targets the whole cluster noun-adjective-numeral-demonstrative, which moves cyclically to the specifier positions of NumP and DP to be licensed. Put differently, snowballing movement affects categories that project between NumP and NP (e.g. NralP, DemP) while cyclic movement targets the whole complement of NumP, derived from snowballing movement.

In this respect, there seems to be a relationship between D-elements, i.e., D° and Num° on the one hand and the NP-complement which combines with the functional projections that host the modifiers (e.g. demonstrative, numeral, adjective, etc.,) creating as such an extended projection, say ∑P (cf. Grimshaw (1991), Cardinaletti (1993)) on the other. That is to say, snowballing movement applies ∑P-internally, while cyclic movement involves the whole ∑P (cf. 26).

(26) [DP [D° lɔ [NumP [Num° lɛ [∑P [∑° [Demonstrative [YP [Numeral [ZP [Adjective [NP]]]]]]]]]



Cyclic movement Snowballing movement

3. THE SPLIT-D HYPOTHESIS

For the purpose of the discussion, I consider the manifestation of this dual movement in Gungbe D-system and the adjacency requirement on D° and Num° as an evidence that the two categories are major components of the articulated DP structure. Indeed, the analysis put forth here is grounded on the idea that determiners always express, among other things, the fact that a nominal expression is specified for the features [±definite], [± specific] on the one

hand and [± plural] on the other. A natural way to account for D° and Num° dependency is to assume a split-D hypothesis where D° and Num° are the heads of two interrelated projections that independently realise the two sets of features (cf. Brousseau & Lumsden (1992), Ritter (1992), Lefebvre (1995), Carstens (1997)). An argument in support of this assumption is that in languages like Gungbe, this duality is morphologically realized in the sense that D° encodes specificity and Num° is the locus of number specification. D° and Num° are in local configuration (cf. Rizzi (1990)). On the other hand, there seems to be no overt manifestation of the functional heads whose specifier positions host modifying elements such as demonstratives, numerals and adjectives. Actually, D° appears to manifest the higher projection of the D-system, while Num° expresses the lower projection which takes ΣP as complement, assuming representation (26) above. In terms of Rizzi (1997), D° and Num° could be regarded as the counterparts of Force° and Fin° in the nominal domain. On the basis of the Gungbe data, we therefore assume, contra Abney (1987), that the D-system represents the left periphery of the nominal system (cf. Szabolcsi (1987) and references cited there).

As seen from examples above, the language allows for the morphological realisation of feature [+specific] as *lɔ́*. But no morpheme signals feature [-specific]. A direct consequence of this phenomenon is that a 'bare noun phrase' or a determinerless noun, will always be interpreted either as (in)definite and non-specific or as generic. Sentences under (27) are examples where the determinerless noun is interpreted as indefinite and non-specific (cf. 27a) and as generic (cf. 27b).

(27)a. *Kòfí xɔ̀ **àgásá***
Kofi buy-Perf crab
'Kofi bought a crab' (indefinite)

b. ***gbètɔ́*** *má* *ɖó* *léblánú*
human Neg possess mercy
'human being (in general) has no mercy' (generic)

In definite contexts, however, a determinerless noun can be interpreted as definite and non-specific. This is shown by the contrast in (28) below. Sentence (28a) illustrates a definite context where the bare noun *jíkù* is definite and non-specific. (28b) on the contrary

instantiates a situation in which the speaker refers to a specific rain, hence the occurrence of the specificity marker *lɔ́*.

(28)a. *kpɔ́n* *jíkù* *bé*
look rain begin
'look it begins to rain'

b. *jíkù* *lɔ́* *hèn* *àgɔ́* *mítɔ̀n* *gblé*
rain Det cause-Perf celebration our spoil
'the (specific) rain spoiled our celebration'

An immediate conclusion that could be drawn here is that Gungbe - and more generally the Gbe languages - does not possess articles in the traditional sense. The specificity marker *lɔ́* is used to refer to entities that are preestablished in discourse or context. Consider, for example, the following two situations:

A/ *Kòfí* is washing the floor and asks his kids to bring him some water. Here the determinerless noun *sìn* 'water' is necessarily interpreted as indefinite and non-specific.

(29)a. *mì* *bà* *sìn* *wá* *ná - mi*
you pour-Inj water come Prep-1sg
'bring me some water'

B/ Assuming situation A, let's suppose that instead of (29a), *Kòfí* uttered sentence (29b):

(29)b. *mì* *bà* *sìn* *lɔ́* *wá* *ná - mi*
you pour-Inj water Det come Prep-1sg
'bring me the (specific) water'

Here the determiner phrase *sìn lɔ́* 'the (specific) water' must be understood as the water that I've already asked you / told you about, i.e., that specific water that both the hearer and the speaker know about. This behaviour of the specificity marker strongly recalls Pesetsky's (1987) notion of D(iscourse) linking that expresses 'the ability to refer to specific members of a set in the mind of the speaker or preestablished in discourse' (Cinque (1990):16). See also Enç (1991), Campbell (1996) and references cited there.

This observation leads us to conclude that Gungbe D° is always occupied by either an overt or a null morpheme. When D° manifests the feature [+specific] it is realized as *lɔ́*. On the contrary a D° marked as [-specific] is occupied by a null morpheme ∅[18] . An argument in favour of this proposal is that non-specific, (i.e., determinerless) and specific nouns appear to have the same distribution. They can occur in various positions such as, subject (cf. 30a), direct object (cf. 30b), prepositional object (cf. 30c), complement of the postnominal nominalizer (cf. 30d), focus (cf. 30e), etc.

(30)a. *ògán (lɔ́) má jà égbè*
chief Det Neg come today
'the (specific) chief is not coming today'

b. *yé mɔ̀ ògán (lɔ́)*
they see-Perf chief Det
'they saw the (specific) chief'

c. *yé dɔ̀ xó ná ògán (lɔ́)*
they say-Perf word to chief Det
'they spoke to the (specific) chief'

d. *yé zé Kòfí yì ògán (lɔ́) dè*
book take-Perf Kofi go chief Det at
'they took Kofi to the (specific) chief'

e. *ògán (lɔ́) wè yé mɔ̀*
chief Det Foc they see-Perf
'they saw THE (specific) CHIEF'

In a similar vein, I suggest that the plural marker *lé* is the morphological realisation of the feature [+plural] on Num°. However when Num° is specified as [-plural], it is occupied by a null morpheme ∅. This correctly predicts that a 'bare noun phrase' always corresponds to singular while a Noun-*lé* phrase necessarily implies plurality (cf. 31).

(31)a. *távò*
'table'

b. *távò lé*
table Num
'tables'

These two variants of the category Num° pattern alike since plural and singular nouns have the same distribution. All these facts support the proposal made earlier that the Gungbe D-system can be partially represented as in (32) repeated here for expository convenience (cf. Ritter (1992), Brousseau & Lumsden (1992), Kinyalolo (1995), Aboh (1996)).

(32) $[_{DP}...[_{D^{\circ}}\ l\acute{o}\ [_{NumP}...[_{Num^{\circ}}\ l\acute{e}.....[_{\Sigma P}..[_{NP}.....]]]]]]$

Assuming Abney's (1987) analysis that 'pronouns are of the syntactic category Det', the question arises how to extend the analysis proposed here to the Gungbe pronominal system. In the next section, I will show that the split-D hypothesis as it is formulated here helps to account for the Gungbe pronominal system in terms of strong, weak and clitic pronouns, each of which is the reflex of a distinct underlying structure (see also Ritter (1991-1992-1995), Zribi-Hertz & Mbolatianavalona (1997a) for the discussion on Hebrew and Malagasy pronominal systems respectively).

4. ON THE SYNTAX OF GUNGBE PERSONAL PRONOUNS

As convincingly argued by Ritter (1992), a split-D hypothesis, i.e., the existence of D° and Num° in languages such as Gungbe, Fongbe, Ewegbe, Gengbe, Hebrew, Haitian, etc., also presupposes 'the existence of at least two classes of pronouns, those of the category D°, and those that involve the category Num°' (Ritter 1992:1). Before getting on to how this idea could apply to Gungbe personal pronouns, a brief outline of the theoretical background is in order.

4.1. Theoretical background

Natural languages exhibit a contrast between so-called strong (stressed, independent) and deficient (destressed, cliticized, affixed) personal pronouns. Since Kayne's (1975) analysis of

French personal pronouns, it has generally been assumed that strong pronouns pattern like full DPs, while deficient pronouns must appear in a derived position at SS (cf. Cardinaletti (1993), Cardinaletti & Starke (1994), Agbebor (1996), Zribi-Hertz & Mbolatianavalona (1997a) among others). As Kayne (1975) proposed for the description of French pronominal system, there are four major properties that help distinguish between strong and deficient (or clitic pronouns):

1. Strong pronouns may be cleft while clitic pronouns cannot (cf. 33a-a'),

(33)a. c'est lui qui parle
it is 3Msg who talk-Pres-3sg
'it is he who is talking'

a'. *c'est il qui parle
it is 3Msg-CL who talk-Pres-3sg

2. Coordination is always possible with strong pronouns, but impossible with clitic pronouns (cf. 33b-b'),

(33)b. lui et Mari parlent
3Msg and Marie talk-Pres-3pl
'he and Marie are talking'

b'. *il et Marie parlent
3Msg-CL and Marie talk-Pres-3pl

3. Strong pronouns can be modified, while clitic pronouns resist such modification (cf. 33c-c'),

(33) c. lui aussi/seul parle
3S-Msg too/alone talk-Pres-3sg
'He too/alone is talking'

c'. *il aussi/seul parle
3Msg-CL too/alone talk-Pres-3sg

4. Strong pronouns can bear contrastive stress, but clitic pronouns cannot (cf. 33d-d').

(33)d. LUI parle
3S-Msg talk-Pres-3sg
'He is talking'

d'. *IL parle
3Msg-CL talk-Pres-3sg

More recently, Cardinaletti (1993), Cardinaletti & Starke (1994) among others pointed out that there is a systematic correlation between property 1 and feature [+human]. Pronouns diverge radically with respect to coordination and reference, when considered from the perspective of the feature [+human]. Consider, for example, the French third person plural feminine nominative pronoun *elles*:

(34)a. Elles sont trop grandes

b. Elles et celles d'à côté sont trop grandes
3Fpl-nom and those besides are too tall

In sentence (34a), the pronoun *elles* 'they' can have a [±human] referent. But in a coordinate structure (34b), the non-human reading is discarded and only a [+human] referent can qualify as possible antecedent. Similar facts are observed across languages which suggest the existence of two distinct classes of pronouns: class (1) includes those pronouns that may be coordinated but can only have human referent; class (2) comprises pronouns that resist conjunction but refer to non-human or human entities.

In terms of Cardinaletti & Starke (1994) elements of class (1) represent strong pronouns while class (2) includes deficient pronouns. The labels 'strong' and 'deficient' are interpreted in terms of internal structure and morphological richness: strong pronouns are regarded as involving more internal syntactic structure and a richer morphology than deficient pronouns.

Strong pronouns are like full DPs in that they have a semantic content similar to that of nouns, and must be referential. They cannot be used either as expletives or as non-referential elements. They must have a referent (recall they are specified as [+human]), and they can be coordinated, focused or topicalized. No such property is available for deficient pronouns

which have no independent referent in the sense that they pick [±human] entities and must be discourse-anaphoric. They cannot be coordinated, focused, nor topicalized. It is therefore assumed that the class of deficient elements includes both weak and clitic pronouns ((see Cardinaletti & Starke (1994)), Kayne (1975) and references cited there for the discussion). The analysis outlined here gives rise to a tripartition in terms of strong, weak and clitic pronouns.

The tripartition is based on facts like those in French examples (35) where it appears that the strong pronoun *lui* 'he' and its deficient counterpart *il* 'he' share similar properties but also differ from certain perspectives. On the one hand, they both occur in subject position and can be deleted under ellipsis (cf. 35a-b).

(35)a. Lui aime les choux mais -- ne les mange que cuit ?

b. Il aime les choux mais -- ne les mange que cuit ?

'he likes cauliflower but -- not them eat other than cooked'

On the other hand, sentences (35c-d) neatly show that these pronouns are also opposed to each other, since *lui* 'he' allows coordination while *il* 'he' disallows it.

(35)c. Lui et son frère ont accepté ?

d. *il et son frère ont accepté ?

he and his brother have agreed ?

French exhibits two weak pronouns *il* 'he': one being weaker or more deficient than the other. Put differently, French involves both weak and clitic pronouns *il* 'he'. A fact that comes in support of this idea is that weak form *il* used in (35b) resists subject inversion, while its homophonous clitic counterpart doesn't (cf. 35e-g).

(35)e. *Aime-t-il les choux mais ne les mange que cuit ?

like-he cauliflower but not them eat other than cooked

f. *Ont-il et son frère accepté ?

have-he and his brother accepted

g. A-t-il accepté le marché ?

have-he accepted the deal

'Did he accept the deal ?'

Weak pronouns are intermediate between strong and clitic pronouns in the sense that they share some distributional properties with the first, while displaying deficiency characteristics of the second, e.g., the lack of coordination. Assuming that deficiency implies lack of a functional category, we can conclude that clitic pronouns are deficient compared to weak pronouns, which in turn are deficient compared to strong pronouns (cf. 36)[19].

(36) clitic < weak < strong (Cardinaletti & Starke 1994: 21)

4.2. Gungbe personal pronouns

Table 1 below is an inventory of Gungbe personal pronouns. Column 1 includes so-called strong pronouns, while columns 2 and 3 represent nominative and accusative deficient pronouns respectively. Column 4 displays Gungbe possessive pronouns.

	Strong Forms	**Weak Forms**		**Possessives**
Person Number		**Nominative**	**Accusative**	
1sg	*nyè*	*(ù)n*	*mi*	*cé*
2sg	*jè*	*à*	*wè*	*tòwè*
3sg	*éɔ̀ (úɔ̀)*	*é*	*e (e - i)*	*étɔ̀n*
1pl	*míle*	*mí*	*mí*	*mítɔ̀n*
2pl	*mìlé*	*mì*	*mì*	*mìtɔ̀n*
3pl	*yélé*	*yé*	*yé*	*yétɔ̀n*

Table 1

4.2.1. Morphology

Table 1 indicates that Gungbe possessives display only two genuine forms: first and second person singular *cé* and *tòwè* respectively. All other forms are derived by a combination of weak pronouns and Gungbe second possessive marker *tɔ̀n*. I do not discuss possessives in this study but see Kinyalolo (1995) and references cited there for a detailed discussion on Fongbe genitive constructions.

Gungbe strong forms have only one set of realisations. They keep the same shape whether they occur in an A-bar left dislocated position (cf. 37a), or as complement of a preposition, i.e., in a case position (cf. 37b). See also section 4.2.2.1. on the distribution of strong pronouns.

(37)a. *nyè yà, ùn ná yì*
1S-sg Top 1W-sg Fut leave
'as for me, I will leave'

b. *Dótù ɖɔ̀ xó ná nyè*
Dotu speak-Perf word to 1S-sg
'Dotu spoke to me'

Instead, weak pronouns manifest two different sets of forms, at least for first, second and third person singular, nominative and accusative. As seen from the table above, plural forms remain identical.

The weak third person singular accusative has different allophones, as it phonetically cliticizes on to the preceding verb or preposition, leading to an alternation into [i] or [ɛ] or their respective nasalized counterparts. Sentences under (38) are illustrations of phonetic cliticization in Gungbe (see da Cruz & Avolonto (1993) for the discussion of Fongbe).

(38)a. *yé gbà e = = > yé gbè*
3W-pl break-Perf 3W-sg they break-Perf-3W-sg
'they broke it'

b. *yé hù e = = > yé hù-ì*
3W-pl kill-Perf 3W-sg they kill-Perf-3W-sg
'they killed it'

c. *yé hì e = = > yé hì-ì*
3W-pl smoke-Perf 3W-sg they smoke-Perf-3W-sg
'they smoked it'

d. *yé xɔ̀ e = = > yé xɔ̀-è*
3W-sg buy-Perf 3W-sg they buy-Perf-3W-sg
'they bought it'

e. *yé* *zè* *e* = = > *yé* *zè-è*
3W-pl cleave-Perf 3W-sg they cleave-Perf-3W-sg
'they cleft it'

When the final vowel of the verb is [o] or [e], no change arises as shown by (38f) below:

(38)f. *yé* *xò/zé* *è*
3W-pl beat/take-Perf 3W-sg
'they beat/took it'

Finally, a comparison between strong and weak pronouns shows that the former have a morphologically richer form than the latter. For example, the plural forms of the strong pronouns are a combination of the weak forms plus the plural marker as in *mílé* 'we', *mìlé* 'you', *yélé* 'they'. A possible conclusion here is that strong pronouns are similar to full DPs in that they too involve a NumP (cf. Ritter (1991-1995)). Similarly, it might be suggested that weak pronouns lack the Num° category since they lack phonetic realisation of the features [±plural] as exemplified by the plural nominative/accusative forms *mí* 'we', *mì* 'you', *yé* 'they'. At first sight, the Gungbe pronominal system exhibits the two classes which we identified as strong and deficient in section 4.1., using a Kaynian terminology. It will in fact turn out later that things are not so clear-cut and a more subtle distinction among deficient or weak pronouns will lead us to a three-type pronominal system including strong, weak and clitic pronouns (cf. Cardinaletti & Starke (1994)). As a first step toward this analysis, let's see some distributional differences between strong and weak pronouns.

4.2.2. Some distributional differences

In this section, I will essentially rely on Kayne's (1975) generalisation as well as Cardinaletti & Starke's (1994) analysis of pronouns (see also Agbedor (1996) for the discussion on Ewegbe pronouns). The distribution of Gungbe strong and weak pronouns will be discussed on the basis of their structural relation with the verb, their ability to be modified, focused or topicalized, their capacity to appear in isolation and to enter coordinate structures and finally their distribution in imperfective/prospective constructions. In so doing, I will show how the split-D hypothesis put forth in this study helps account for the Gungbe pronominal system.

4.2.2.1. Structural relation with the verb

Gungbe weak personal pronouns can occur in subject or object positions. Accordingly, they are in complementary distribution with other subject and object DPs as illustrated in (39a-b) and (39c-d) respectively.

(39)a. *ùn / à / é / mí / mì / yé* *ná* *yì*

1W-sg/2W-sg/3W-sg/1W-pl/2W-pl/3W-pl Fut leave

'I, you, he (she), we, you, they will leave'

b *Kòfí* (**é*) *ná* *yì*

Kofi 3W-sg Fut leave

'Kofi he will leave'

c. *Dótù dín* *mí / wè / ì / mí / mì / yé*

Dotu look-Perf 1W-sg/2W-sg/W-3sg/1W-pl/2W-pl/3W-pl

'Dotu looked for me, you, him, us, you, them'

d. *Dótù dín* *Kòfí* (**ì*)

Dotu look-Perf Kofi 3W-sg

'Dotu looked for Kofi-(him)'

Strong forms are excluded from ordinary subject and object positions (cf. 39e-f), except when they bear contrastive stress, as illustrated by the grammatical (39g). Needless to say, weak pronouns cannot be stressed (cf. 39h).

(39)e. **nyè / jè / éɔ / mílé / mìlé / yélé* *ná* *yì*

1S-sg/ 2S-sg/3S-sg/1S-pl/2S-pl/3S-pl Fut leave

f. **Dótù dín* *nyè / jè / éɔ / mílé / mìlé / yélé*

Dotu look-Perf 1S-sg/2S-sg/3S-sg/1S-pl/2S-pl/3S-pl

g. ***nyè*** *ná* *yì*

1S-sg Fut leave

'I (not you) will leave'

g' *Kòfí *é ɔ* *ná* *yì*

Kofi 3S-sg Fut leave

h. ***ùn** *ná* *yì*
1W-sg Fut leave

Examples (39g-g') are clear indications that, in contexts where the strong pronoun bears an emphatic reading, it competes with full DPs for the same position[20]. This property of strong pronouns also appears in genitive constructions involving the genitive case marker *sín* which exclusively selects either strong pronouns or full DPs (cf. 40a-b). As illustrated by the ungrammatical (40c), *sín* never cooccurs with weak pronouns, (see Kinyalolo (1995) for the discussion of genitive constructions in Fongbe).

(40)a. *Dótù* *sín* *àkwé*
Dotu Gen money
'Dotu's money'

b. *é͡ɔ* *sín* *àkwé*
1S-sg Gen money
'his money'

c. ***é*** *sín* *àkwé*
1W-sg Gen money
'his money'

4.2.2.2. Ability to be modified

Just as full DPs, Gungbe strong pronouns can be modified by noun-phrase internal modifiers, i.e., adjectives, demonstratives (cf. 41a) as well as adverbials that can modify the whole noun-phrase (cf. 41b).

(41)a. *jè* *xóxó* *éhè* *ná* *yì*
2S-sg old Dem Fut leave
'you old this will leave'

b. *nyè* *có* *ná* *yì*
1S-sg alone Fut leave
'I alone will leave'

It is interesting to note that, in some contexts, strong pronouns can cooccur with the specificity marker *lɔ́* (cf. 41c) on a par with common nouns or proper names (cf. 41d-e). See Longobardi (1994) for the discussion of proper names.

(41)c. *jè* *éhè* *lɔ́,* *àdɔ̀* *wè* *ná* *hù* *wè*
2S-sg Dem Det greediness Foc Fut kill 2W-sg
'you (specific) this, you will die from GREEDINESS'

d. *òví* *lɔ́* *wè* *ùn* *tò* *díndîn*
child Det Foc 1W-sg Imperf search-search
'I'm looking for THE CHILD'

e. *Kòfí* *lɔ́* *wè* *ùn* *tò* *díndîn*
Kofi Det Foc 1W-sg Imperf search-search
'I'm looking for KOFI' (e.g. Kofi did something wrong and I badly want to see him)

Gungbe weak subject and object pronouns are never modified, or realised with the specificity marker as exemplified by ungrammatical (42a-c).

(42)a. **à* *xóxó* *éhè* *ná* *yì*
2W-sg old Dem Fut leave
'you old this will leave'

b. **Dótù* *ná* *yrɔ́* *mi* *có*
Dotu Fut call 1W-sg alone
'Dotu will call me alone'

c. **à* *éhè* *lɔ́,* *à* *ná* *yì*
2W-sg Dem Det 2W-sg Fut leave
'you(specific) this you will leave'

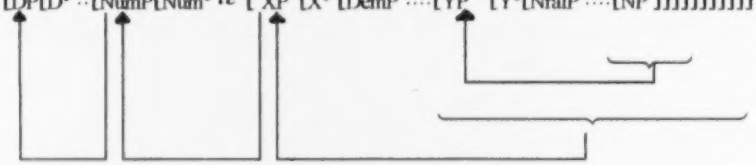
4.2.2.3 Strong pronouns vs. weak pronouns: evidence for the split-D hypothesis

Assuming the Gungbe DP internal structure proposed in section 3 above, we can account for the Gungbe pronominal system by postulating that strong pronouns consist of an articulated DP structure which contains a nominal projection as well as the different functional projections that host the specificity and plural markers, (recall from section 4.2.1. that all

plural forms take the plural marker *lɛ́*), plus the functional projections whose specifiers are occupied by demonstratives, adjectives, etc. This amounts to saying that pronominal DPs corresponding to Gungbe strong pronouns have an articulated structure similar to that of full DPs (see section 2 above).

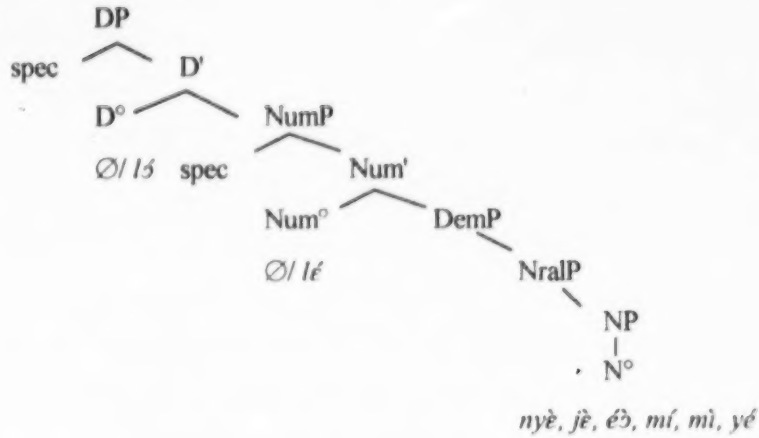
In addition, the fact that the demonstrative *éhè* intervenes between the strong pronoun and the specificity marker *lɔ́* in (41c) strongly suggests that there is no N-to-D movement in Gungbe pronominal DPs[21]. If that were the case, the pronoun would be left-adjacent to the specificity marker, yielding as such ungrammatical **éhè jè lɔ́* 'this you [specific]'. I thus propose that even though Gungbe strong pronouns are generated under N°, snowballing movement moves the whole NP to the left of the functional projection hosting the numeral, followed by movement of the phrase pronoun-numeral to the left of the demonstrative. Then after, the phrase pronoun-numeral-demonstrative created by snowballing movement, moves cyclically to [spec NumP] and to [spec DP] where it is specified for number, i.e., [±plural] and for person respectively (cf. 43a).

(43)a. [$_{DP}$[D° ..[$_{NumP}$[Num° *lɛ́* [$_{XP}$ [X° [$_{DemP}$ ....[$_{YP}$ [Y°[$_{NralP}$ ....[$_{NP}$]]]]]]]]]]



In Gungbe strong pronouns, D° is marked for person, while Num° contains number specifications (cf. Ritter (1992 - 1995)). When the pronoun is marked as [+plural], the head Num° is phonetically realised as *lɛ́* e.g., first, second and third person plural. But when the pronoun is specified as [-plural], Num° is occupied by a null morpheme. As for D° the locus of person specification, it is always realised by a null morpheme (except in some limited cases where the pronoun cooccurs with the specificity marker *lɔ́* which is inserted in D° (cf. 41c)). If this is true, the underlying structure of the Gungbe strong pronouns can be represented as follows:

(43)b.



An indirect argument in favour of representation (43b) is that in Gengbe and Ewegbe the strong plural forms appear to be a combination of a weak pronoun plus the specificity and plural markers. In his account for Ewegbe pronouns, Agbedor (1996) writes: 'for the first person plural strong pronoun, we have the form *mi+la+wo* from which we derive *mi-a-wo*' (Agbedor 1996: 21). The same analysis could be extended to the Gengbe first person plural strong form which is realised as *míáwó* literally 'we+specificity marker+plural marker'. The Gengbe case is even more telling since neither the specificity marker *á* nor the plural marker *ó* undergoes any morphological change (assuming [w] is a support morpheme).

The difference between Gungbe and these languages is that D° is not always realised in Gungbe strong plural forms, hence the ungrammatical *míɔ́lé* 'we+specificity marker+plural marker' as opposed to the grammatical *míle* 'we+plural marker'. Yet this means not that D° is absent in such configuration, since it can cooccur with modified strong pronouns as in (41c) above repeated here for convenience.

(41)c. *jè* *éhè* *lɔ́,* *àdɔ̀* *wè* *ná* *hù* *wè*

2S-sg Dem Det greediness Foc Fut kill 2W-sg

'You (specific) this, you will die from greediness'

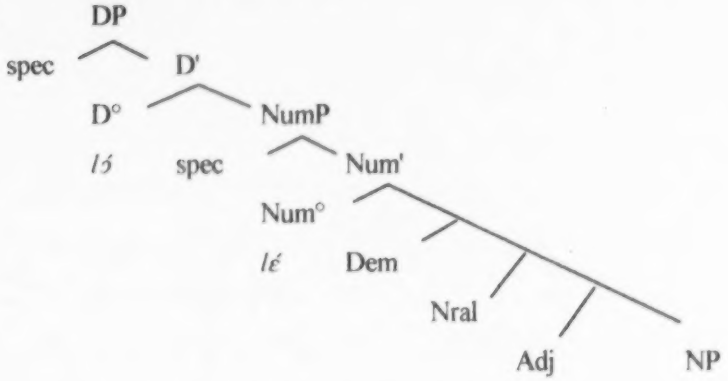
In addition the pronoun and the plural marker can be separated by other material such as demonstratives, adjectives, and the specificity marker as illustrated in (44a).

(44)a. *mì* *xóxó* *àtɔ̀n* *éhè* *lɔ́* *lé*

2S-pl old three Dem Det Num

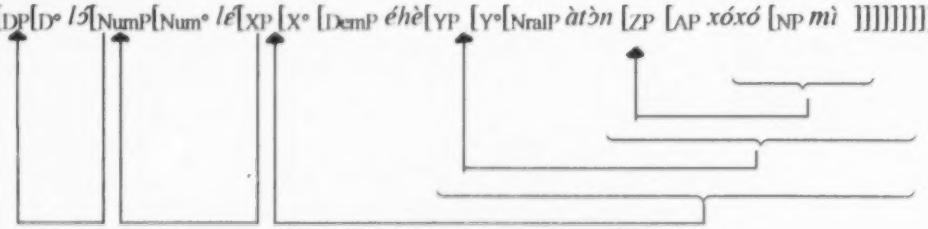
'these old three of you (specific)'

b.



Assuming the underlying structure (11b) repeated here as (44b), example (44a) is a clear indication of the impossibility of N-to-D° movement in Gungbe D-system. Instead, there is NP movement to the left of the adjective, followed by the movement of the phrase pronoun-adjective to the left of the numeral. The phrase pronoun-adjective-numeral moves to the left of the demonstrative and finally the whole phrase pronoun-adjective-numeral-demonstrative moves cyclically through the specifier of NumP, thus finally surfacing in [spec DP] as represented in (44c).

(44)c. [$_{DP}$[$_{D°}$ *lɔ́*[$_{NumP}$[$_{Num°}$ *lé*[$_{XP}$[$_{X°}$ [$_{DemP}$ *éhè*[$_{YP}$ [$_{Y°}$[$_{NralP}$ *àtɔ̀n* [$_{ZP}$ [$_{AP}$ *xóxó* [$_{NP}$ *mì*]]]]]]]]]



Notice in passing that an analysis in terms of N-to-D° movement would wrongly predict that, at SS, the pronoun precedes the plural marker and the determiner, while adjectives, demonstratives and numerals should remain in their base position, as exemplified by ungrammatical (44d) below:

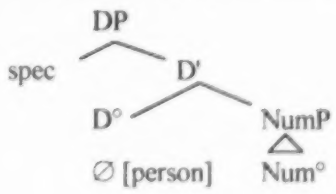
(44)d. **mì* *lé* *lɔ́* *éhè* *àtɔ̀n* *xóxó*

2S-pl Num Det Dem Nral Adj

Granting the analysis proposed here for strong pronouns, I conclude that the impossibility of modifying Gungbe weak pronouns (cf. 42) is due to their reduced internal structure. Gungbe weak pronouns lack the functional projections that host adjectives, demonstratives, and other modifying elements. To some extent, this corresponds to Cardinaletti & Starke's (1994) analysis of deficiency in terms of 'missing structure'. But, the analysis proposed here differs from theirs since, in the present study, deficiency doesn't lead to peeling off the topmost projection in the structure. Instead, deficiency is interpreted from the perspective of less articulated structure.

In a similar vein, the impossibility of having a weak pronoun with the specificity or plural markers can be considered a consequence of the head status of weak pronouns. Let us assume that weak pronouns are 'D-elements' in the sense that they only realise functional projections DP and NumP. Suppose further that weak pronouns are of the category Num where they are generated and specified for number, i.e. [±plural]. If this is the correct characterisation, then it can be argued that at SS, the head pronoun must undergo head-to-head movement, i.e., Num°-to-D° movement in order to be marked for person. The analysis proposed here straightforwardly accounts for the incompatibility of weak pronouns and modifiers as well as the specificity and plural markers. In addition, it helps understand the nature of deficiency that characterises weak pronouns. Gungbe weak pronouns can therefore be attributed the underlying structure represented in (45) below:

(45)



ùn, á, é, mí, mì, yé Weak subject pronouns

mi, wè, è, mí, mì, yé Weak object pronouns

40

4.2.2.4. Gungbe pronouns in focus and topic constructions

One other distinction in support of the hypothesis that strong pronouns have an articulated structure like full DPs as opposed to weak pronouns which involve a reduced internal structure is their behaviour with respect to focus/topic constructions. Strong pronouns allow focus and topic constructions while weak pronouns disallow strategies involving the left periphery.

Gungbe focus constructions require the preposing of the focused category immediately to the left of the focus marker *wè* (cf. 46a). Examples (46b-c) show that strong pronouns are admitted in this position, while weak pronouns are not.

(46)a. *Kɔ́kú wè Dótù ná yrɔ́ --*
Koku Foc Dotu Fut call
'Dotu will call KOKU'

b. *nyè wè Dótù ná yrɔ́ --*
1S-sg Foc Dotu Fut call

c. **mi wè Dótù ná yrɔ́ --*
1W-sg Foc Dotu Fut call
'Dotu will call ME'

Similarly, topic constructions necessarily trigger the preposing of the topic to the left of the topic marker *yà* and the occurrence of a resumptive pronoun in IP-internal position (46d). Example (46e) shows that strong pronouns can be realized in topic position, but this possibility is not available for their weak counterparts (46f).

(46)d. *Kɔ́kú yà, Dótù ná yrɔ́ - è*
Koku Top Dotu Fut call-3sg
'As for Koku, Dotu will call him'

e. *nyè* *yà* *Dótù* *ná* *yrɔ́ - mi*
1S-sg Top Dotu Fut call-1W-sg

f. **mi* *yà* *Dótù* *ná* *yrɔ́ - mi*
1W-sg Top Dotu Fut call -1W-sg
'As for me, Dotu will call me'

The focus/topic contrast exhibited by strong and weak pronouns is confirmed by the fact that only strong pronouns can be used in isolation as an answer to questions (cf. 47a-b).

(47)a. *ménú* *wè* *Dótù* *ná* *yrɔ́* --
who Foc Dotu Fut call
'Who will Dotu call'

b. *nyè* (**mí*) *wè*
1S-sg 1W-sg Foc

In addition, Gungbe manifests a question morpheme *lò* that occurs postnominally (cf. 48a). In such context, only strong forms are used (cf. 48b-c). See Agbedor (1996) for a description and discussion of similar facts in Ewegbe.

(48)a. *Kɔ̀kú* *lò*
Koku QM
'What about Koku'? or 'Where is Koku'?

b. *éɔ̀* *lò*
3S-sg QM

c. **é* *lò*
3W-sg QM
'What about him/her'?

The data presented so far clearly indicate that Gungbe pronominal system involves two sets of elements. On the one hand, we have strong pronouns: *nyè - jè - éɔ̀ - mílé - mìlé - yélé*. They are like full DPs in the sense that they project a similar articulated internal structure. As they can be modified by demonstratives or adjectives, I suggest that they too involve the different functional projections that host these elements, hence (43b) above. On the other hand, we have weak subject and object pronouns. They are in complementary distribution with strong

pronouns in the sense that where a weak pronoun is allowed, a strong pronoun is always excluded (unless it is emphatic) and vice-versa. Furthermore, weak pronouns never cooccur with demonstratives or adjectives. This leads me to the conclusion that their 'weakness' results from structural deficiency in the sense that they lack some of the categories that are normally present in strong pronouns. For example, they are deprived of the functional projections that host demonstratives and adjectives. Accordingly they can be represented as in (45) above.

4.2.2.5. On a refined characterisation of Gungbe weak personal pronouns

If it is conceivable that Gungbe strong pronouns form a homogeneous class, things are not so clear-cut with regard to weak pronouns, since their differences with respect to strong pronouns cannot be always accounted for by means of the simple bipartition in terms of strong vs. weak elements. Actually, there is at least one context where Gungbe weak pronouns do share the properties of strong pronouns. For example, sentences under (49) below show that both strong and weak pronouns can be deleted under ellipsis.

(49)a. *Dótù dù nú bò nù sìn*
Dotu eat-Perf thing Coord drink-Perf water
'Dotu ate and drunk some water'

b. *éwɔ̀ wè dù nú bò nù sìn*
3S-sg Foc eat-Perf thing Coord drink-Perf water
'HE ate and drunk some water'

c. *é dù nú bò nù sìn*
3W-sg eat-Perf thing Coord drink-Perf water
'he ate and drunk some water'

Moreover, a look at Gungbe coordinate structures indicates that weak elements do not form a homogeneous class. In coordinate structures, a full noun-phrase can be conjoined with any strong pronoun as shown by (50a).

(50)a. *Dótù ná yrɔ́ Kɔ̀kú kpó nyè/ jè / éɔ̀ / mílé / mìlé / yélé kpó*
Dotu Fut call Koku and 1S-sg/2S-sg/3S-sg/1S-pl/2S-pl/3S-pl and
'Dotu will call Koku and me/you/him(her)/us/you/them'

With respect to weak pronouns, first and second person singular pronouns are excluded from such constructions as illustrated by (50b).

(50)b. *Dótù ná yrś Koku kpó *mi/*wé/é /mí / mì/ yé kpó*
Dotu Fut call Koku and 1W-sg/2W-sg/3W-sg/1W-pl/2W-pl/3W-pl and
'Dotu will call Koku and him (her) /us /you/them'

Notice further that it is possible to conjoin either two strong pronouns or a strong pronoun plus a weak pronoun (i.e., 3sg, 1pl, 2pl, 3pl) as illustrated in (50c-d). Yet, conjunction of two weak pronouns is possible only when the two conjuncts are not first and second person singular, hence the contrast between (50e) and (50f). Notice that sentence (50f) would still be ungrammatical even if the order of the conjuncts is reversed.

(50)c. *Dótù ná yrś nyè kpó yélé kpó*
Dotu Fut call 1S-sg and 3S-pl and
'Dotu will call me and them'

d. *Dótù ná yrś è kpó nyè kpó*
Dotu Fut call 3S-sg and 1S-sg and
'Dotu will call him/her and me'

e. *Dótù ná yrś mì kpó é kpó*
Dotu Fut call 1W-sg and 3W-sg and
'Dotu will call me and him/her'

f. **Dótù ná yrś mì kpó wè kpó*
Dotu Fut call 1W-sg and 2W-sg and
'Dotu will call me and you'

The distribution of weak pronouns with respect to coordination calls for a more refined distinction within the class of so-called deficient Gungbe pronouns. In fact the data presented in (50) above suggest that Gungbe weak pronouns fall into two different sub-groups. The first deficient group includes Gungbe weak pronouns that pattern like strong pronouns with respect to coordination: they can be conjoined with full noun phrases as well as with other strong or weak pronouns. This group comprises third person singular on the one hand, and first, second and third person plural on the other (i.e., 3sg, 1pl, 2pl, 3pl). The second group

consists of first and second person singular (1sg and 2sg). They cannot be coordinated as illustrated by the contrast in (50e-f) and they resist coordination with full nouns (cf. 50b). In terms of Cardinaletti & Starke (1994), pronouns of group one are considered 'weak pronouns', while those of group two will be regarded as 'clitics'.

We now have enough evidence to abandon the 2-way system proposed above (cf. 43b-45). We therefore propose a finer method by postulating a 3-way system that perfectly captures the Gungbe facts in terms of strong, weak and clitic pronouns. A context where these three pronominal types neatly appear is that of imperfective constructions.

The Gungbe imperfective construction requires the occurrence of the imperfective marker *tò* followed by the object, which in turn precedes the verb as illustrated in (51a). Sentence (51b) shows that intransitive verbs must reduplicate when associated with the imperfective marker. As seen from sentence (51c), the imperfective marker somehow licences the parasitic prospective marker *nà*. In prospective constructions the preposed object occurs to the right of the imperfective marker but precedes the prospective marker *nà* (cf. 51c). Verb reduplication is blocked by the intervening prospective marker (cf. 51d). Notice finally that imperfective constructions involve a floating low tone that occurs sentence-finally and which is represented here by an additional stroke [ˋ] (cf. Aboh (1996-1998) and references cited there for the discussion on imperfective and prospective constructions in Gbe).

(51)a. *Dótù tò Kòkú yrɔ́*
Dotu Imperf Koku call
'Dotu is calling Koku'

b. *Dótù tò yìyǐ*
Dotu Imperf leave-leave
'Dotu is leaving'

c. *Dótù tò Kòkú nà yrɔ́*
Dotu Imperf Koku Prosp call
'Dotu is about to call Koku'

d. *Dótù tò nà (*yì) yǐ*
Dotu Imperf Prosp leave
'Dotu is about to leave'

Given that the object precedes the verb or the prospective marker in imperfective or prospective constructions involving transitive verbs (cf. 51a-51c), a natural question that arises here is that of the position occupied by pronominal objects in such structures: Can we pronominalize the noun object *Kòkú* in examples (51a-51c) leading as such to the word order Subject- *tò*-Pronoun- (*nà*) -Verb?

It appears that the 3-way system best serves to describe pronominalization in imperfective, prospective and related constructions. Example (52a) shows that strong pronouns are normally excluded from the preverbal object position, unless they are read as emphatic. Sentence (52b) illustrates the fact that weak first, second and third person plural are allowed in this position while first, second and third person singular are excluded (cf. 52c). Sentence (52d) indicates that first, second and third person singular must remain in a postverbal position, and the verb must reduplicate. In prospective constructions, however, verb reduplication is blocked even though weak pronouns must follow as shown in (52e).

(52)a. *Dótù tò nyè yrɔ́*
Dotu Imperf 1S-sg call
'*Dotu is calling me'
'Dotu is calling me (specifically as opposed to somebody else)

b. *Dótù tò mí /mì /yé yrɔ́*
Dotu Imperf 1W-pl 2W-pl 3W-pl call
'Dotu is calling us, you, them'

c. *Dótù tò *mi/*wè/*é yrɔ́*
Dotu Imperf 1/2/3W-sg call
'Dotu is calling me, you, him'

d. *Dótù tò yíyrɔ́ mĩ̌ /we᷈ / ɛ̃́*
Dotu Imperf call-call 1W-sg/2W-sg/3W-sg
'Dotu is calling me, you, him/her'

e. *Dótù tò nà yrɔ́ mĩ̌ /we᷈ / ɛ̃́*
Dotu Imperf Prosp call 1W-sg/2W-sg/3W-sg
'Dotu is about to call me, you, him/her'

Suppose, as proposed in Aboh (1996-1998) that the position occupied by the preposed object corresponds to an argument position, that is, the specifier position of the aspect functional projection, say AspP3, whose head Asp°3 hosts the prospective marker. Assume further that object movement to [spec AspP3] results from the fact that the Gungbe imperfective/prospective clause involves a small (or reduced) clause whose subject position (i.e., [spec AspP3]) must be filled at SS to satisfy the EPP. Granting that this is the correct characterisation, it is then reasonable to think of [spec AspP3] as a position that can host object noun phrases and possibly pronouns that qualify as full DPs (e.g., emphatic strong pronouns). Since nothing in principle prevents weak object pronouns from targeting this position, we should expect [spec AspP3] to host all those pronouns which are normally found in object positions as illustrated in (53) below:

(53) *Dótù yrś mi / wè / è / mí / mì / yé*
Dotu call-Perf 1,2,3W-sg 1,2,3W-pl
'Dotu call me /you /him /we /you /them'

Yet, the contrast in (52a-c) above shows that this prediction is not borne out, since only strong pronouns and weak plural pronouns are allowed in the preverbal position. The 3 types of pronouns that we found in coordinate structures also emerge here: strong pronouns are like full DPs, they occasionally occur in [spec AspP3] when they are read as emphatic. Though they share a number of properties with deficient elements with respect to focus, topic, question, modifiers, etc., weak pronouns (i.e., first second and third person plural) appear to be less deficient since they too can occur in the preverbal position and be coordinated (just as strong pronouns). Finally, so-called clitic pronouns, i.e., first and second person singular are the weakest of all. They are banned from [spec AspP3] and cannot be coordinated, focused, topicalized nor modified.

As for third person singular, it should be regarded as a 'mutant form' in the sense that it belongs neither to weak pronouns nor to clitic pronouns. Rather, it shares properties of both classes. In the preceding paragraphs, it appeared that third person singular *é* was involved in coordinate structures and therefore could be classified as weak pronoun. This was exemplified by (50d) above repeated here for convenience.

(50)d. *Dótù ná yrɔ̂ è kpó nyè kpó*

Dotu Fut call 3S-sg and 1S-sg and

'Dotu will call he and me'

But as seen from example (52c) this pronoun is excluded from the preverbal object position i.e., [spec AspP3] and must occur postverbally together with first and second person singular which I consider clitic pronouns.

One observation that supports the analysis of Gungbe third person singular object pronoun as a mutant form is that there is now a development in the language, whereby third person singular *è* can occur in the preverbal object position being cliticized on to the imperfective marker *tò* which is changed into *dó* (cf. 54a). No such strategy is available for first and second person singular (cf. 54b).

(54)a. %*Dótù* ***dó-è*** *yrɔ̂*

Dotu Imperf-3W-sg call

'Dotu is calling him/her'

b. **Dótù* ***dó-mi /wè*** *yrɔ̂*

Dotu Imperf-1/2W-sg call

'Dotu is calling me/you'

In addition, the third person singular pronoun sharply contrasts with genuine weak pronouns (i.e. the plural forms of object pronouns) when it comes to prospective, a construction which is parasitic on imperfectives. As seen from examples (51c-d) above, a prospective sentence necessarily bears an imperfective feature which is realised by the imperfective marker *tò* followed by an NP-object, a strong pronoun or marginally a weak pronoun, which in turn precedes immediately the prospective marker *nà* (cf. 55a-c). However, the third person singular pronoun is totally excluded from such construction, on a par with first and second person singular pronouns. This explains the degradation of sentence (55d) as opposed to (55c) and also (54a) above.

(55)a. *Dótù tò Kòfí nà yrɔ̂*

Dotu Imperf Kofi Prosp call

'Dotu is about to call Kofi'

b. *Dótù tò é nà yrɔ̂*
Dotu Imperf 3S-sg Prosp call
'Dotu is about to call him/her'

c. ?*Dótù tò mì nà yrɔ̂*
Dotu Imperf 2W-pl Prosp call
'Dotu is about to call you'

d. **Dótù **do-é** nà yrɔ̂*
Dotu Imperf-3W-sg Prosp call
'Dotu is about to call him/her'

For the purpose of the present study, I will continue to consider Gungbe third person object pronoun a mutant form, that is, a pronoun which is halfway in its mutation from weak pronoun to clitic. Consequently, it displays properties which intersect with those of both weak and clitic elements. Just as all members of the deficient class, it cannot be focused, topicalized, modified, etc. Similarly to weak elements, it enters coordinate structures contrary to clitic elements which resist such constructions. Finally, in imperfective sentences, it shares the same distribution as clitic pronouns, i.e., first and second object pronouns.

4.2.2.6. Recapitulation

The Gungbe pronominal system can be characterised as involving three sub-groups: strong pronouns, weak subject/object pronouns and clitic object pronouns. As proposed earlier, strong pronouns are like full DPs: they project a more articulated internal structure involving different functional projections such as DP, NumP whose heads D° and Num° are the locus of person and number specifications, as well as functional projections Nral, DemP, etc., whose specifiers host modifying elements as demonstratives, numerals and adjectives (cf. 43). At SS, snowballing movement applies. The NP-complement moves to the left of the adjective, then the phrase pronoun-adjective moves to the left of the numeral giving rise to the phrase pronoun-adjective-numeral. The phrase pronoun-adjective-numeral in turn moves to the left of the demonstrative and then the phrase pronoun-adjective-numeral-demonstrative moves cyclically to [spec NumP] and [spec DP] to be specified for number and person. This DP-

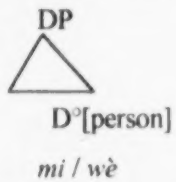
internal movement leads to the word order pronoun-adjective-numeral-demonstrative-Det-Num observed in (44a) above and repeated here.

(44)a. *mì* *xóxó* *àtɔ̀n* *éhè* *lɔ́* *lé*
2S-pl old three Dem Det Num
'these old three of you (specific)'

As for subject and object weak pronouns, they are weaker than strong pronouns because they include less articulated structure. They only involve the functional projections DP and NumP and thus qualify as elements of the category Num. Accordingly, it is argued here that weak pronouns are generated under Num° where they are specified for number. As D° is the locus of person specification, Num°-to-D° movement applies at SS in order for the pronoun to be specified for person (cf. 45). Notice in passing that the head status of weak pronouns helps account for the degradation of (54c), assuming adjunction to a phonetically realised aspect head, here Asp°3, is banned in Gungbe (cf. Aboh (1998)).

Object clitic pronouns are the weakest of all. As seen from examples (52) above, they basically include first and second person singular *mi* and *wè*: two elements that inherently lack number (or plural) specification. We therefore conclude that the Gungbe object clitics are DPs which contain only the head D° which is only specified for person. In other words, Gungbe object clitics lack the projection NumP, they are intransitive Ds in the sense of Abney (1987), (but see also Ritter (1992-1995), Cardinaletti (1993) among others). The Gungbe object clitics are attributed representation (56) below.

(56)



We can now characterise the Gungbe pronominal system as shown in table 2 below.

	Strong Forms	Weak Forms		Clitics
Person Number		**Nominative**	**Accusative**	**Object**
1sg	*nyè*	*(ù)n*	--	*mi*
2sg	*jè*	*à*	--	*wè*
3sg	*éɔ̀ (úɔ̀)*	*é*	*e (ɛ - i)*	*e (ɛ - i)*
1pl	*míɬé*	*mí*	*mí*	--
2pl	*mìlé*	*mì*	*mí*	--
3pl	*yélé*	*yé*	*yé*	--

Table 2

5. CONCLUSION

In this article, I developed the idea that Gungbe determiner phrase has a head-initial underlying structure. I further propose that Gungbe D-system involves a more articulated structure. That is to say DP includes different functional projections, NumP, DemP, NralP etc. which project between D° and NP. D° and Num° host the specificity marker and the number marker respectively. In terms of the split-D hypothesis, they are considered two interrelated components of D and must be in local relation. This hypothesis is supported by the fact that nothing can intervene between the specificity marker *ɬɔ́* and the number marker *lé*. As for the labels DemP and NralP, they refer to the functional projections whose specifier positions host modifying maximal projections such as demonstratives and numerals (cf. Cinque (1993-1996), Giusti (1992), Brugè (1996), Ritter (1991-1992-1995), Siloni (1996-1997), among others).

Differently from Brousseau & Lumsden (1992), I proposed that the surface NP-Det-Num order found in Gungbe and more generally in Gbe languages results from the application of the GLC as proposed by Sportiche (1992) (see also Kynialolo (1995)). This criterion, an analogous of wh/focus/topic/neg criteria, requires that a [+f] head must be in spec-head relationship with a [+ f] XP. Conversely, a [+f] XP must be in a spec-head relationship with a head marked as [+f]. It turned out from this refined DP structure that the application of the GLC triggers two movement-types in Gungbe. On the one hand, snowballing movement

involves successive bigger chunks, as the nominal phrase first moves to the left of the adjective creating the phrase noun-adjective. This phrase moves to the left of the numeral creating the phrase noun-adjective-numeral, which in turn moves to the left of the demonstrative. On the other hand, cyclical movement targets the whole cluster noun-adjective-numeral-demonstrative which moves cyclically to [spec NumP] and [spec DP] to be licensed. Here, the GLC is satisfied via a spec-head relation that is established between the representational chain formed by the phrase noun-adjective-numeral-demonstrative in [spec DP] and its trace on the one hand and the relevant head D° on the other.

Extending the split-D hypothesis to Gungbe pronominal system, I suggested a tripartition in the light of Kayne (1975) and Cardinaletti & Starke (1994). As a result, three types of pronouns were identified. Strong pronouns are like full DPs in that they involve a similar articulated structure. An argument in favour of this hypothesis is that strong pronouns can cooccur with demonstratives, adjectives, numerals. In addition, the morphology of first, second and third person plural forms of strong pronouns clearly indicates that they too involve NumP whose head Num° hosts the number marker, as exemplified by *mílé, mìlé, yélé,* literally '1/2/3 person +number marker'. A natural explanation that derives from these facts is that, in Gungbe DP structure, number specifications is property of the head Num° while person specification is attributed to D° (cf. Ritter 1992-1995).

Weak pronouns are members of the deficient class. They lack some of the categories that are present in strong pronouns. For example, the impossibility of having a weak pronoun plus a demonstrative or an adjective is seen as the consequence of the absence of the categories DemP and NralP in their internal structure. In a similar vein, the fact that they never cooccur with the specificity or number markers is interpreted as a reflex of their head status. It is thus proposed that weak pronouns are 'D-elements' in the sense that they only project the categories DP and NumP. The weak pronoun is inserted in Num° where it is specified for number and moves to D° to check person specification. In other words, Gungbe weak pronouns manifest Num°-to-D° movement. Object clitic pronouns are the weakest of all. They are analysed as intransitive Ds in the precise sense that they manifest a DP which only contains the head D°, the anchorage of person specifications. That is to say Gungbe object clitics lack the projection NumP as well as all the projections that are normally present in full

DPs. Contrary to Cardinaletti & Starke (1994), the tripartition theory developed here is not grounded on the hypothesis that structural deficiency automatically leads to peeling off the topmost projection in the structure. Instead, deficiency or weakness is interpreted from the perspective of less articulated or missing internal structure, regardless of the level of such lack.

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[2] Gungbe is a tonal language of the Gbe family, a subgroup of Kwa languages (cf. Capo (1988)). The variety under study here, is spoken in the southern part of Benin in Porto-Novo. I follow the writing system adopted in Benin, but I adopt the practice of transcribing nasalized vowels with *in ɛn un ɔn an*, and the palatal nasal consonant [ɲ] into *ny*.

[3] In this study, I use the terms 'determiner' and 'specificity marker' interchangeably (see sections 2, 3 for the discussion on the specificity marker).

[4] The (in)definite and generic Gungbe nouns are identified by the context. See section 3 for a brief discussion.

[5] In his account for Fongbe D-system, Kinyalolo (1995) argues against Brousseau & Lumsden's (1992) first proposal that Fongbe (and by implication other Gbe languages) exhibits a head-final DP projection in that the surface word order found in determiner phrases matches the DP underlying structure of these languages (see also Lefebvre (1992)). He then adopts a head-initial hypothesis and proposes that the surface Noun-Det order results from the satisfaction of Sportiche's Generalized Licensing Criterion which requires that the complement of D be moved in [spec DP].

[6] It is important to notice that the impossibility of realising the English determiner and elements such as demonstratives, articles simultaneously does not necessarily mean that the English DP involves a flat structure as opposed to Gungbe-type languages. In fact, the analysis proposed in this study can also be extended to English (and possibly) all languages.

[7] Gungbe actually displays two genitive case markers: *sín* and *tɔ̀n*. An argument case marked by *sín* occurs prenominally as in (a) and postnominally when it is case marked by *tɔ̀n* as in (b). See Kinyalolo (1995) for the discussion on Fongbe genitive markers.

(a) *Kɔ́jó* *sín* *mótò*
Kojo Gen car
'Kojo's car'

(b) *mótò* *Kɔ́jó* *tɔ̀n*
car Kojo Gen
'Kojo's car'

[8] See Rizzi (1991-1996), Haegeman & Zanuttini (1991), Haegeman (1995), Brody (1990), Puskàs (1992) for the discussion of the Wh-criterion, the Neg-criterion and the Focus criterion.

[9] This is an updated version of Abney's (1987) 'f-selection': 'there are syntactic relations between all heads and their complements or adjuncts, by which those complements and adjuncts are licensed – a minimal condition on a well-formed syntactic structure is that every node be licensed by some such relation' Abney (1987):55. In terms of the present framework, such licensing relation is expressed through a spec/head configuration where the complement moves to the specifier position of its head.

[10] See also Zribi-Hertz & Hanne (1995) for a discussion of the category Spf° (specific) as a component of the D-system which projects between D° and NP in Bambara. In their account for specificity marking in Bambara, Zribi-Hertz & J-F. Hanne (1995) proposed that, in this language, the D-system involves a Specificity Phrase which is the locus of features [± specific]. SpfP projects between D° and Num° as represented below.

[DP .... [SpfP .... [NumP.... [NP.....]]]

[11] An alternative would be to assume that languages which don't manifest an overt number marker possess a synchretic D° which encodes, among other features, the feature specification [±plural].

[12] It has been proposed in the literature that such movement is typical to languages which are traditionally treated as SOV (cf. Kayne (1994), Cinque (1996) and references cited there). Assuming that SVO is the

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universal base order, the generalisation seems to be that the licensing conditions which trigger certain head (e.g., N-to-D) movements in some languages are responsible for cyclical or snowballing movement of the maximal projection including the head in other languages. If true, the difference between Kikuyu which manifests the order N-Dem-Num-Adj (cf. Hawkins (1983)) and Gungbe which exhibits N-Adj-Num-Dem would be that Kikuyu involves cyclical N-movement to D, while Gungbe involves snowballing movement as suggested above. Notice in passing that the order found in Kikuyu clearly confirms an analysis of nominal modifiers (demonstrative, numeral, adjective) in terms of XP-elements. Thanks to Chris Collins for helpful comments.

[13] In terms of Giusti (1992) DemP and NralP are considered AgrPs that project between D° and NP.

[14] Thanks to Guglielmo Cinque for discussing previous versions of the analysis presented here.

[15] As suggested to me by Michal Starke (p.c.) an alternative could be that the head N° firstly moves via Nral° to the head position Y°, immediately to the left of the numeral. Then the projection YP as a whole moves to [spec XP] to the left of the demonstrative. Finally, XP moves cyclically to [spec NumP] and [spec DP] to satisfy the GLC. A priori the result is the same as the one proposed above.

[16] Alternatively, Anne Zribi-Hertz (p.c.) suggests that the Gungbe adjectives could be seen as elements of the type X°. The word order obtained in (31) above could therefore be derived by NP movement to [spec ZP], the specifier position of the functional projection headed by the adjective. Then, ZP moves leftward to [spec YP] which in turn moves to [spec XP]. Finally XP as a whole moves cyclically to [spec NumP] and [spec DP] where it is licensed on the basis of the GLC. One drawback of this analysis is that it loses the generalisation we are trying to reach here, that is, demonstratives, certain numerals and adjectives are elements of the type XP which occupy the specifier position of a functional projection (see Cinque (1993 - 1996), Giusti (1992 - 1995) Brugè (1996) among others).

[17] Here locality is expressed in terms of Rizzi's Relativized Minimality: A is in Local Configuration with B iff there is no C such that (a) C is of the same structural type as B and (b) C intervenes between A and B (for the discussion see Rizzi (1990) and references cited there).

[18] See Longobardi (1994) for the discussion of the existence of null D.

[19] See Cardinaletti & Starke (1994) and references cited there for a detailed discussion on the three types of pronouns.

[20] Notice that in topic constructions where the full DP is left-dislocated, a sentence corresponding to (42g') is grammatical:

Kòfí	*yà,*	*é͡ɔ*	*ná*	*yì*
Kofi	Top	3S-sg	Fut	leave

'As for Kofi, he will leave'

In such constructions, the strong pronoun is necessarily read as emphatic.

[21] But see Giusti (1992), Cinque (1993), Cardinaletti (1993), Longobardi (1994) where an N-to-D movement is assumed in order to account for the distribution of (pre and post) nominal modifiers.

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